

# PEAK PERFORMANCE

Part Four  
In a Series by  
Dr. Fred Hatfield

## AMINO ACID ANALYSIS

• *People on high-protein diets tend to be protein starved, paradoxically; those on a high carbohydrate diet generally are in much better amino acid balance.* Over the years it's been customary for athletes to think, "If I want to excel in my sport, if I want to become big and strong, I must eat more protein – specifically, animal protein. Yes, there seems to be a certain logic in football players, wrestlers, bodybuilders, weightlifters and boxers making meat the main course of their diet. After all, these strength athletes are the "lions" of the sports world, and who ever heard of lions sitting down to a meal of nuts, fruits and vegetables?

Yet when biochemical analysis is done, revealing how the body is functioning, that traditional, seemingly logical theory of sports nutrition just doesn't hold up. The direct feedback from athletes on a high-protein diet (consisting of more than 2 grams of protein per kilogram of bodyweight per day) is that they are very unhealthy, tend to suffer from nutritional allergies, have problems with their kidneys and other organs, and – remarkable – are protein starved

Scientists in Georgia tested athletes who were taking in more than 2 grams per kilogram of bodyweight of animal protein a day, yet their bodies were assimilating only about 30 grams. These individuals actually were losing muscle weight and strength because they were intolerant to that excessive amount of protein. Their bodies were not able to break it down. If you take in too much protein, the body gets to a point where it actually seems to turn off the assimilation process, as if to say, "Hey, you're putting in too much. I can't handle it. There's too much for me to break down and de-toxify. So, forget it, I'm shutting down.

As far as amino acid analysis is concerned, no one seriously would suggest that such testing is imperative for everyone active in sports. The weekend or recreational athlete really doesn't need to worry about body chemistry and maximum performance. Most serious athletes may not see a need for sophisticated biochemical testing, either. For such individuals, a basically sound diet (minimum 70% carbohydrate, with 1.2-1.8 grams of protein per kilogram of bodyweight per day), daily vitamin-mineral supplementation, and a careful, intelligent amino acid program (high in branch-chain amino acids; i.e., a formula specially designed for athletes) should serve the nutritional needs adequately.

But at the elite level in athletics, sophisticated bioanalytic techniques such as amino acid analysis are important, if not imperative. After all, athletic performance has entered the high-tech age. And it hardly makes sense to use highly scientific training techniques and the most advanced equipment while leaving one's nutrition up to chance.

Editor's Note: We are extremely fortunate to have Dr. Fred Hatfield share some of his insightful training ideas on achieving peak athletic performance without drugs. Dr. Hatfield is a prolific and creative writer of over fifteen books on weight training. After spending years as a track and field athlete, soccer player, gymnast, olympic weightlifter and bodybuilder, Dr. Hatfield turned to the sport of powerlifting. He is known as Dr. Squat and his 1014 squat in Hawaii this year was another world record; one of many set by this champion of champion.

So the elite modern athlete intent on maximizing performance can – and should – take steps to ensure that the body is biochemically correct and balanced. It's important to check whether the thyroid, adrenals and liver are functioning properly. Is there a sufficient amount of vitamins and minerals in the body? Most important of all, it's crucial for such an athlete to make sure there are no blocks in any of the amino acid cycles, the metabolic pathways in the body.

And how do you make sure there are no blocks? The only way to find out is by undergoing an amino acid analysis.

There are only a few labs in the country which perform a new analytical technique measuring levels of amino acids in the body. This is done primarily by means of a urine test. It can be mailed in, so the athlete does not have to leave home to have the analysis performed. Following the test, the athlete is put on an appropriate amino acid supplementation regimen, and periodically retested to determine if there are imbalances in the individual's amino acid cycles. This allows the scientists to fine-tune the diet and supplement regimen to optimize physical performance.

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